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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,361

10/25/2007

Wouter Detlof Berggren

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EXAMINER

HARP, WILLIAM RAY

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/550,361	<b>Applicant(s)</b> BERGGREN, WOUTER DETLOF	
	<b>Examiner</b> William R. Harp	<b>Art Unit</b> 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/21/2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) was submitted on September 21, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. However, the citation of U.S. Patent No. 30018329 fails to comply with 37 CFR 1.98 because no such document exists. However, the examiner, during a search of the prior art, has found a document published on the date indicated and by the inventor indicated. The correct document is USPN 3001829. The examiner is citing this reference in the attached PTO-892.

3. The information disclosure statement filed September 21, 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the other documents listed (International Search Report, Written Opinion) have not listed the publisher, or the place of publication. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim element “means for charging” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or

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associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Womack (USPN 4934569).

8. Regarding Claim 1, Womack teaches a hopper vessel (11), having a receiver part (bottom of vessel) with a downwardly converging wall (12) provided with a discharge port (as illustrated), and an aerator (10). The aerator comprises a supply passage (14) in the form of a tubular member (as illustrated) connectable to a supply of pressurized aeration fluid [C2, L61]. The tubular member comprises a side wall (as illustrated) provided with one or more openings (18). The tubular member is positioned on or close to the converging wall (as illustrated)

9. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Dakin et al. (USPN 3942689).

10. Regarding Claim 1, Dakin et al. teaches a hopper vessel (10), having a receiver part with a downwardly converging wall (30) provided with a discharge port (14) and an aerator (12).

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Dakin et al. teaches the aerator is a pipe [C3, L3], which the examiner considers to be a supply passage in the form of a tubular member. The aerator is connected to a supply of pressurizing fluid [C3, L8-13]. Dakin et al. teaches that the air is forced out through apertures in the pipe [c3, L10-13]; therefore, the tubular member would have a sidewall and one or more openings.

11. Regarding Claim 2, it would be

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Womack.

15. Regarding Claim 2, Womack teaches a source of air, [C2, L61], yet fails to teach a pressurization device. However, it would have been obvious to connect the supply passage to a pressurization device because they are well-known in the art.

16. Regarding Claim 3, the tubular member extends in a substantially off-vertical direction (as illustrated).

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17. Regarding Claim 4, one or more openings face an upward direction (as illustrated).
18. Regarding Claim 5, the tubular member extends along a longitudinal tube axis (as illustrated), and the discharge port is in alignment with the longitudinal tube axis (as illustrated).
19. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dakin et al..
20. Regarding Claim 2, Dakin et al. teaches a source of air, as described above, yet fails to teach a pressurization device. However, it would have been obvious to connect the supply passage to a pressurization device because they are well-known in the art.
21. Regarding Claim 3, the tubular member extends in a substantially off-vertical direction (as illustrated).
22. Regarding Claim 4, while the openings are not illustrated and Dakin et al. fails to teach upward facing openings, upward facing openings would have been obvious as a design choice.
23. Regarding Claim 5, the tubular member extends along a longitudinal tube axis (as illustrated), and the discharge port is in alignment with the longitudinal tube axis (as illustrated).
24. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dakin et al. as applied to claim 5 above, and further in view of Dirkse et al. (USPN 5106240).
25. Regarding Claim 6 Dakin et al. teaches openings, yet fails to teach a distributor. Dirkse et al. teaches a distributor (16) comprising a porous material [C5, L17-21]. It would have been obvious to use a distributor as is known in the art.
26. Regarding Claim 7, Dakin et al. teaches a discharge zone as claimed (illustrated) and the supply passage is outside the discharge zone.

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27. Regarding Claim 8, Dakin et al. teaches the openings, yet fails to teach the direction of the openings. However, the direction of the openings would have been obvious as a design choice.

28. Claims 9, 10, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mink (USPN 4955989) in view of Dakin et al..

29. Regarding Claim 9, Mink teaches a sluice vessel (2). The sluice vessel has a low pressure state and high pressure state [C5, L4-26]. It has a means for charging (11) the sluice vessel when it is in its low pressure state [C5, L2-26], a means for increasing the pressure (5, 12), and a discharge port (16). The pressure is increased before discharging [C5, L4-26]. Mink further teaches pressurizing fluid inlet means (5) arranged to be submerged under the load (as illustrated). Mink fails to teach the pressurizing fluid inlet means comprises a supply passage in the form of a tubular member whereby the tubular member comprises a side wall provided with one or more openings. Dakin et al. teaches a supply passage, tubular member, and openings as described above. It would have been obvious to use the pressurizing fluid inlet means of Dakin et al. in the sluice vessel of Mink since the elements are known and one of ordinary skill could have combined them by known methods and achieved predictable results.

30. Regarding Claim 10, the tubular member of Dakin et al. extends in a substantially off-vertical direction (as illustrated).

31. Regarding Claims 15-17, it would have been obvious that the combination of Mink and Dakin et al. would operate in its normal and expected fashion to perform the claimed method. Further, it would have been obvious to specify the pressure volumetric rate of the aeration fluid as a design choice.



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32. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mink in view of Dakin et al. as applied to claim 10 above, and further in view of Dirkse et al. (USPN 5106240).

33. Regarding Claim 11, Mink in view of Dakin et al. teaches openings, yet fails to teach a distributor. Dirkse et al. teaches a distributor (16) comprising a porous material [C5, L17-21]. It would have been obvious to use a distributor as is known in the art.

34. Regarding Claim 12, Dakin et al. teaches a discharge zone as claimed (illustrated) and the supply passage is outside the discharge zone.

35. Regarding Claim 13, Mink illustrates a downwardly converging wall (as illustrated), wherein the pressurizing fluid inlet means is arranged close to the wall.

36. Regarding Claim 14, Mink in view of Dakin et al. teaches the pressurizing fluid inlet means, yet fails to teach the direction of the pressurizing fluid inlet means. However, the direction of the pressurizing fluid inlet means would have been obvious as a design choice.

### ***Conclusion***

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William R. Harp whose telephone number is (571) 270-5386. The examiner can normally be reached on Monday - Thursday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gene Crawford/  
Supervisory Patent Examiner, Art Unit  
3651

/W. R. H./  
Examiner, Art Unit 3651